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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,832	09/19/2003	Jack C. Wybenga	SAMS01-00276	6033

7590 06/26/2007

Docket Clerk
P.O. Box 800889
Dallas, TX 75380

EXAMINER	
PHAN, MAN U	
ART UNIT	PAPER NUMBER
2616	
MAIL DATE	DELIVERY MODE
06/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/665,832	WYBENGA ET AL.	
	Examiner	Art Unit	
	Man Phan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 9-10, 17* is/are rejected.

7)☒ Claim(s) *3-8,11-16 and 18-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The application of Wybenga et al. for an "Apparatus and method for hairpinning data packets in an Ethernet MAC chip" filed 09/19/2003 has been examined. Claims 1-20 are pending in the application.

2. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, assurance of proper use for Trademarks ™, and other legal symbols @, where required, and clarity of meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper antecedent basis for "the" and "said" within each claim). Minor typographical errors could render a Patent unenforceable and so the applicant is strongly encouraged to aid in this endeavor.

Claim Objections

3. Claims 1, 3, 6, 7, 9, 14, 15, 17 are objected to because of the following informalities:

The claims contain the phrase "capable of". It has been held that the recitation that an element is "capable of" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. Appropriate correction is required.

Claim Rejections - 35 USC ' 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-2 and 9-10, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Civanlar et al. (US#6,078,963) in view of Wong (US#2004/0001478).

With respect to claims 1-2 and 9-10, the references disclose a distributed router which facilitates communication between processors across networks, according to the essential features of the claims. Civanlar discloses in Fig. 1 a block diagram illustrated a router 100 comprising: a switch fabric (see column 2 lines 41-44 in Detailed Descriptions of Preferred

Embodiments); a N Layer 2 modules coupled by the switch fabric (see column 3 lines 5-10 in Detailed Descriptions of Preferred Embodiments) and a first one of the Layer 2 modules comprises a Layer 3 routing engine capable of forwarding a first received data packet through the switch fabric directly to a second one of the Layer 2 modules using a Layer 3 address associated with the first received data packet if the first Layer 2 module does not recognize a Layer 2 address associated with the first received data packet (see column 3 lines 28-47 in Detailed Descriptions of Preferred Embodiments). The forwarding engine 105 may process received data packets (e.g., Open System Interconnection (OSI) model Layer 3 data packets such as IP packets) and/or forward the data packets to appropriate other intelligent router ports 103 via the switching fabric 102. Specifically, the forwarding engine 105 may compare an address of a data packet with the routing table to determine the location the intelligent router port 103 to which the data packet should be forwarded (See also Figs. 3-4; Col. 2, lines 56 plus).

However, Civanlar et al. does not expressly disclose the MAC processor for determining whether a first data packet received from the ingress processor is directed to the egress processor. Wong from the same or similar field of endeavor teaches in Fig. 4 a block diagram illustrated a network device, in which the ingress of each port P0-P7 is coupled to MUX 304 and trunked so that the output of MUX 304 is input into MAC 402. As traffic is received into switching unit 306, either from an external port or from MUX 304, the MAC 402 in conjunction with the other subsystems of switching unit 306 may route the data packets as appropriate and perform other switching functions. Accordingly, circuitry is provided to route data packets directly to the egress of ports P0-P7 from MAC 402. Therefore, incoming traffic via ports P0-P7 may be trunked via circuitry and MUX 304. Therefore, network devices connected to ports P0-P7 are

automatically isolated from one another via MUX 304. Traffic going downstream to subscribers or network clients connected to ports P0-P7 is switched normally and routed outside of MUX 304 directly to the ports P0-P7, such as via circuitry. For example, in FIG. 4 each egress is connected directly to MAC 402 and traffic switched downstream is routed around MUX 304. Accordingly, all traffic into switch-MUX 300 is switched, however only traffic upstream (i.e., from ports P0-P7) is trunked ([0026]-[0028]).

Regarding claim 17, it's a method claim corresponding to the apparatus claims above. Therefore, claim 17 is analyzed and rejected as previously discussed with respect to the claims above.

One skilled in the art would have recognized the need for efficiently classify traffic in a distributed architecture router, and would have applied Wong's novel use of MAC processor in providing select values to multiplexers into Civanlar's teaching of the routing and forwarding engines in a distributed router. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Kumar's high speed parser into Civanlar's router with de-centralized processing using intelligent ports with the motivation being to provide a method and apparatus for transferring data between an ingress and egress processors in the same routing node.

Allowable Subject Matter

8. Claims 3-8, 11-16 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein the MAC processor determines that the first data packet is directed to the egress processor if the address of the first data packet matches an address of the MAC processor, as specifically recited in the claims.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Allison et al. (US#6,137,804) show a system and method for automatic retry of transmit, independent of a host processor, after an underrun occurs in a LAN.

The Yoon et al. (US#2004/0264488) shows an apparatus and method for processing packets.

The Zancan et al. (US#6,879,598) shows a flexible media access control architecture.

The Teng et al. (US#2005/0044249) show a method and apparatus for unifying MAC protocols.

The Kumar et al. (US#7,233,597) show a high speed parser.

The MacFaden et al. (US#2004/0114518) show an adaptive classification of network traffic.

The Chow et al. (US#2002/0126672) show a method and apparatus for a flexible and reconfigurable packet classifier using CAM.

The Kim et al. (US#2004/0153573) is cited to show a distributed router for dynamically managing forwarding information and method thereof.

The Kim et al. (US#2004/0111426) show a dynamic management method for forwarding information in router having distributed architecture.

The Choe (US#7,031,320) show an apparatus and method for performing high speed IP route look up and managing routing/forwarding tables.

The Choe et al. (US#2003/0067925) show a routing coordination protocol for a massively parallel router architecture.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

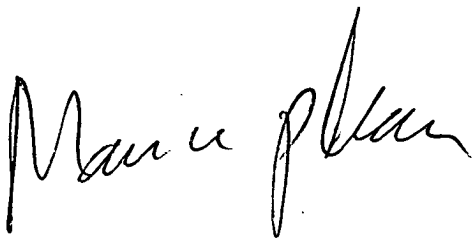
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

06/21/2007.



MAN U. PHAN
PRIMARY EXAMINER